MULTIMEDIA **UNIVERSITY ®**

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FINAL EXAMINATION

TRIMESTER 2, 2016 / 2017

PCA0084 – COMPUTER SYSTEM AND WEB DESIGN
(Foundation in Management)

1 MARCH 2017
9:00 a.m. – 11:00 a.m.
(2 Hours)

INSTRUCTIONS TO STUDENT

1. This question paper consists of 3 pages (excluding the cover page) with 5 questions only.

2. Answer **ALL** questions. All questions carry equal marks and the distribution of the marks for each question is given.

3. Please write all your answers in the Answer Booklet provided.

QUESTION 1 [10 Marks]

a. A keyboard contains keys used to enter data and instructions into a computer or mobile device. List and describe **TWO (2)** common keys that a computer keyboard has.

(3 marks)

b. A webcam feeds or streams images in real time to or through a computer to computer network. State **TWO (2)** activities that can be done when a user uses a webcam.

(2 marks)

c. In a crowded environment, what are the **TWO (2)** most suitable output devices users can use to hear audio output? Briefly explain them.

(3 marks)

d. As a professional photographer, Terri has many options for printing the photos she shoots. However, if she wants to print the photos immediately at an event for her customers, a dye-sublimation printer will be the best option. What is a dye-sublimation printer? Identify another **TWO (2)** industries that use this type of printer.

(2 marks)

QUESTION 2 [10 Marks]

a. Processors contain a control unit and an arithmetic logic unit (ALU). These two components work together to perform processing operations. Describe the processing operations performed by these components.

(5 marks)

b. Random access memory (RAM) consists of memory chips that can be read from and written to by the processor and other devices. Two common types of RAM are dynamic RAM (DRAM) and static RAM (SRAM). How is DRAM different from SRAM?

(2 marks)

c. Most desktop computers and servers contain one or more hard disk drives. A current hard disk can store an amazing amount of data in a little space. Briefly explain **THREE (3)** factors that determine the storage capacity of hard disks.

(3 marks)

QUESTION 3 [10 Marks]

a. One function of an operating system is to determine the order in which tasks are processed. State **FOUR (4)** tasks that are being coordinated by the processor.

(4 marks)

Continued...

b. Memory management is the act of managing computer memory. How does an operating system manage computer memory?

(3 marks)

c. To reduce the size of a file without losing important data, compress it with a file compression tool.

    i. Identify **TWO (2)** advantages of compressing files.

(2 marks)

    ii. List **TWO (2)** common compressed file formats.

(1 mark)

QUESTION 4 [10 Marks]

a. Wireless transmission is used when installing cables or using wired transmission would be impossible, impractical or inconvenient. Briefly explain each wireless transmission below.

    i. Broadcast radio
    ii. Cellular radio

(2 marks)

b. Network standards and protocols often work together to move data through a network. Ethernet, token ring and TCP/IP are some of the network standards and protocols used. How are these network standards and protocols different from each other?

(3 marks)

c. A fiber-optic cable consists of a bundle of glass threads, each of which is capable of transmitting messages modulated onto light waves. Identify **FIVE (5)** reasons why has this physical transmission media been used by companies to replace their original analog phone lines.

(5 marks)

Continued...

QUESTION 5 [10 Marks]

a. Validation checks ensure that data entered into the computer is sensible. Data is checked in accordance with a set of rules. The computer's software can validate data while it is being entered into the computer.

    i. What is the main purpose of data validation?

(1 mark)

    ii. Describe **TWO (2)** set of rules being used to validate data.

(3 marks)

b. A biometric device is a security identification and authentication device. Such devices use automated methods of verifying or recognising the identity of a person based on a physiological or behavioral characteristic. Briefly explain **TWO (2)** biometric devices being used.

(3 marks)

c. The risk of hardware failure is the malfunction within the electronic circuits or components of a computer system. State **THREE (3)** factors that can lead to hardware failure.

(3 marks)

End of Paper